



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,919	12/07/2005	R. Thomas Derryberry	873.0121.U(US)	2654
29683	7590	08/25/2006	EXAMINER	
HARRINGTON & SMITH, LLP			MILLER, BRANDON J	
4 RESEARCH DRIVE			ART UNIT	
SHELTON, CT 06484-6212			PAPER NUMBER	
			2617	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/559,919

Applicant(s)

DERRYBERRY ET AL.

Examiner

Brandon J. Miller

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 24-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claim 23 contains allowable subject matter because the prior art does not teach or fairly suggest at least four reverse supplemental channel (R-SCH) states and at least eight transitions between the R-SCH states, where the at least four R-SCH states comprise a R-SCH initialization state, a R-SCH autonomous state, a R-SCH scheduled state, and a R-SCH release state.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 10-13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadaba et al. (US 2002/0172217 A1).

Regarding claim 1 Kadaba teaches a method for operating a mobile station with a base station, comprising: when the mobile station is in an Autonomous mode of operation, autonomously transmitting data from the mobile station to the base station on a reverse access channel or reverse supplemental channel (see abstract and paragraphs [0024] & [0025]). Kadaba teaches in response to receiving an acknowledgement indication from the base station, that comprises a reverse channel assignment message for the mobile station, switching the mobile station to a Scheduled mode of operation; and transmitting data from the mobile station on an assigned reverse channel (see paragraphs [0027] & [0062]).

Regarding claim 2 Kadaba teaches transmitting from the mobile station to the base station to initiate the data transmission comprises transmitting a Supplemental Channel Request Message (see paragraph [0024]).

Regarding claim 3 Kadaba teaches a reverse access channel that comprises a Reverse Enhanced Access Channel and reverse fundamental channel or reverse dedicated channel (see paragraph [0026]).

Regarding claim 4 Kadaba teaches an acknowledgement indication that comprises a Supplemental Channel Assignment Message (see paragraph [0024]).

Regarding claim 10 Kadaba teaches a mobile station, comprising: an RF transceiver for conducting bidirectional wireless communications with a base station; and a data processor operating under the control of a stored program for, when the mobile station is in an Autonomous mode of operation, autonomously transmitting from the mobile station to the base station on one of a reverse access channel and a reverse supplemental channel (see paragraphs [0024] & [0025]). Kadaba teaches a data processor being responsive to a reception of an acknowledgement indication from the base station, that comprises a reverse channel assignment message for the mobile station, for switching the mobile station to a Scheduled mode of operation and for transmitting data from the mobile station on an assigned reverse channel (see paragraphs [0027] & [0062]).

Regarding claim 11 Kadaba teaches a device as recited in claim 2 and is rejected based on the same reasoning as above.

Regarding claim 12 Kadaba teaches a device as recited in claim 3 is rejected based on the same reasoning as above.

Art Unit: 2617

Regarding claim 13 Kadaba teaches a device as recited in claim 4 and is rejected based on the same reasoning as above.

Regarding claim 19 Kadaba teaches a mobile station and base station that communicate over a reverse synchronous code division, multiple access channel (see paragraphs [0009] & paragraph [0089]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-9, 14-18, 20-22 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadaba et al. (US 2002/0172217 A1) in view of Fong et al. (US 2004/0223455 A1).

Regarding claim 5 Kadaba teaches a device as recited in claim 4 except for where the acknowledgement indication further comprises power control bits and data rate grant bits. Fong teaches power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include where the acknowledgement indication further comprises power control bits and data rate grant bits because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 6 Fong teaches where the power control bits and data rate grant bits are received by the mobile station on a common channel (see paragraphs [0033] & [0042])

Regarding claim 7 Kadaba teaches a device as recited in claim 1 except for transmitting mobile station buffer activity bits and a data rate request bit, and further comprising receiving, from the base station, a power control bit, a data rate grant bit and an acknowledgment/non-acknowledgement indication. Kadaba does teach an acknowledgment/non-acknowledgement indication (see paragraph [0033]). Fong teaches transmitting mobile station buffer activity bits and a data rate request bit, and further comprising receiving, from the base station, a power control bit, a data rate grant bit (see paragraphs [0033] and page 9, claim 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include transmitting mobile station buffer activity bits and a data rate request bit, and further comprising receiving, from the base station, a power control bit, a data rate grant bit and an acknowledgment/non-acknowledgement indication because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 8 Fong teaches where the data rate request bit is transmitted as part of a dynamic buffer status report, and requests one of an increase in data rate, a decrease in data rate, or no change in the data rate (see paragraph [0033]).

Regarding claim 9 Kadaba and Fong teach a device as recited in claim 8 except for where the data rate grant bit is time multiplexed by the base station with the power control bit, and indicates one of a grant of the requested data rate or a denial of the requested data rate. Fong does teach power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). Fong does teach indicating one of a grant of the requested data rate or a denial of the requested data rate (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include where the data

Art Unit: 2617

rate grant bit is time multiplexed by the base station with the power control bit, and indicates one of a grant of the requested data rate or a denial of the requested data rate because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 14 Kabada and Fong teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 15 Kabada and Fong teach a device as recited in claim 6 and is rejected given the same reasoning as above.

Regarding claim 16 Kabada and Fong teach a device as recited in claim 7 and is rejected given the same reasoning as above.

Regarding claim 17 Kabada and Fong teach a device as recited in claim 8 and is rejected given the same reasoning as above.

Regarding claim 18 Kadaba and Fong teach a device as recited in claim 8 except for where the data rate grant bit is time demultiplexed by the base station with the power control bit, and indicates one of a grant of the requested data rate by the base station or a denial of the requested data rate. Fong does teach power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). Fong does teach indicating one of a grant of the requested data rate or a denial of the requested data rate (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include where the data rate grant bit is time demultiplexed by the base station with the power control bit, and indicates one of a grant of the requested data rate by the base station or a denial of the requested data rate because this would allow for an improved method of transmitting

information relating to a data rate over a reverse wireless link.

Regarding claim 20 Kadaba teaches a method for operating a mobile station with a base station for transmitting data packets from the mobile station to the base station over a reverse supplemental channel (see paragraphs [0026] & [0033]). Kadaba teaches when the mobile station is in an Autonomous mode of operation, autonomously transmitting data from the mobile station to the base station initiate a data transmission from the mobile station to the base station (see abstract and paragraphs [0024] & [0025]). Kadaba teaches supplemental channel request message that is transmitted over a reverse enhanced access channel or a reverse supplemental channel (see paragraph [0026]). Kadaba teaches in response to receiving an acknowledgement indication from the base station switching the mobile station to a Scheduled mode of operation; and transmitting data packets from the mobile station on an assigned reverse channel (see paragraphs [0027] & [0062]). Kadaba does not specifically teach receiving an acknowledgment indication from the base station over a common power control channel, the acknowledgement indication comprising a Supplemental Channel Assignment Message comprising power control bits and data rate grant bits, transmitting mobile station buffer activity bits and a data rate request bit and receiving from the base station a power control bit, a data rate grant bit and an acknowledgement/non-acknowledgement indication. Kadaba does teach an acknowledgement/non-acknowledgement indication (see paragraph [0033]). Fong teaches a channel assignment message (see paragraph [0030]) comprising power control bits and data rate grant bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). Fong teaches transmitting mobile station buffer activity bits and a data rate request bit, and further comprising receiving, from the base station, a power control bit, a data rate grant bit (see paragraphs [0033]



Art Unit: 2617

and page 9, claim 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include receiving an acknowledgment indication from the base station over a common power control channel, the acknowledgement indication comprising a Supplemental Channel Assignment Message comprising power control bits and data rate grant bits, transmitting mobile station buffer activity bits and a data rate request bit and receiving from the base station a power control bit, a data rate grant bit and an acknowledgement/non-acknowledgement indication because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 21 Kadaba and Fong teach a device as recited in claim 20 except for where the data rate grant bit is transmitted as part of a dynamic buffer status, QoS level and transmit power report, and requests one of an increase in data rate, a decrease in data rate, or no change in data rate. Fong does teach power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). Fong does teach indicating one of a grant of the requested data rate or a denial of the requested data rate (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include where the data rate grant bit is transmitted as part of a dynamic buffer status, QoS level and transmit power report, and requests one of an increase in data rate, a decrease in data rate, or no change in data rate because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 22 Kabada and Fong teach a device as recited in claim 9 and is rejected given the same reasoning as above.

Regarding claim 31 Kadaba teaches a method for operating a mobile station with a base

Art Unit: 2617

station, comprising: when the mobile station is in an Autonomous mode of operation, autonomously transmitting data from the mobile station to the base station on a reverse channel (see pgs. 2, paragraphs [0024] and [0025]). Kadaba teaches in response to receiving an acknowledgement indication from the base station switching the mobile station to a Scheduled mode of operation; and transmitting data from the mobile station on an assigned reverse channel (see pg. 3, paragraph [0027] and pg. 6, paragraphs [0062]). Kadaba does not specifically teach the mobile station receiving an assignment message from the base station, the assignment message comprising an acknowledgment/non-acknowledgment indication, power control bits, and data rate grant bits. Kadaba does teach an acknowledgment/non-acknowledgment indication (see paragraph [0033]). Fong teaches power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include the mobile station receiving an assignment message from the base station, the assignment message comprising an acknowledgment/non-acknowledgment indication, power control bits, and data rate grant bits because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 32 Kadaba teaches a mobile station, comprising: an RF transceiver for conducting bidirectional wireless communications with a base station; and a data processor operating under the control of a stored program for, when the mobile station is in an Autonomous mode of operation, autonomously transmitting from the mobile station to the base station on one of a reverse channel (see pgs. 1 & 2, paragraphs [0024] and [0025]). Kadaba teaches a data processor being responsive to a reception of an acknowledgement indication from

Art Unit: 2617

the base station for switching the mobile station to a Scheduled mode of operation and for transmitting data from the mobile station on an assigned reverse channel (see pg. 3, paragraph [0027] and pg. 6, paragraphs [0062]). Kadaba does not specifically teach an assignment message comprising an acknowledgement/non-acknowledgment indication, power control bits, and data rate grant bits. Kadaba does teach an acknowledgment/non-acknowledgement indication (see paragraph [0033]). Fong teaches power control bits (see paragraph [0042]) and data rate grant bits (see paragraph [0033]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include the mobile station receiving an assignment message from the base station, the assignment message comprising an acknowledgment/non-acknowledgment indication, power control bits, and data rate grant bits because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

Regarding claim 33 Kadaba teaches a method for operating a mobile station with a base station for transmitting data packets from the mobile station to the base station over a reverse supplemental channel (see paragraphs [0026] & [0033]). Kadaba teaches when the mobile station is in an Autonomous mode of operation, autonomously transmitting data from the mobile station to the base station initiate a data transmission from the mobile station to the base station (see abstract and paragraphs [0024] & [0025]). Kadaba teaches supplemental channel request message that is transmitted over a reverse enhanced access channel or a reverse supplemental channel (see paragraph [0026]). Kadaba teaches in response to receiving an acknowledgement indication from the base station switching the mobile station to a Scheduled mode of operation; and transmitting data packets from the mobile station on an assigned reverse channel (see

Art Unit: 2617

paragraphs [0027] & [0062])). Kadaba does not specifically teach transmitting mobile station buffer activity bits and a data rate request bit and receiving from the base station a power control bit, a data rate grant bit and an acknowledgement/non-acknowledgement indication. Kadaba does teach an acknowledgment/non-acknowledgement indication (see paragraph [0033]). Fong teaches transmitting mobile station buffer activity bits and a data rate request bit, and further comprising receiving, from the base station, a power control bit, a data rate grant bit (see paragraphs [0033] and page 9, claim 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include transmitting mobile station buffer activity bits and a data rate request bit and receiving from the base station a power control bit, a data rate grant bit and an acknowledgement/non-acknowledgement indication because this would allow for an improved method of transmitting information relating to a data rate over a reverse wireless link.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the limitation "the R-SCH state" in line 7. There is insufficient antecedent basis for this limitation in the claim. The limitation makes the scope of the claim indeterminate because the claim defines at least four R-SCH states and it is unclear as to which one is to be initialized in accordance with line 7.

***Claim Objections***

Claims 24-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

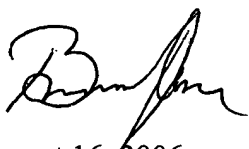
Kuchibhotla et al. U.S Patent No. 6,993,342 B2 discloses buffer occupancy used in uplink scheduling for a communication device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J. Miller whose telephone number is 571-272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



August 16, 2006



GEORGE ENG  
SUPERVISORY PATENT EXAMINER